

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-79 (Canceled).

Claim 80 (Previously Presented): A lubricant composition containing a main amount of a liquid, a semisolid, or a solid lubricant and an amount, having detergent activity, of at least one Mannich adduct prepared by

a) alkylation of a phenol with a highly reactive polyisobutene having a number average molecular weight of less than 1000 and a polydispersity of less than 3.0 at below about 50°C in the presence of an alkylation catalyst;

b) reaction of the reaction product from a) with

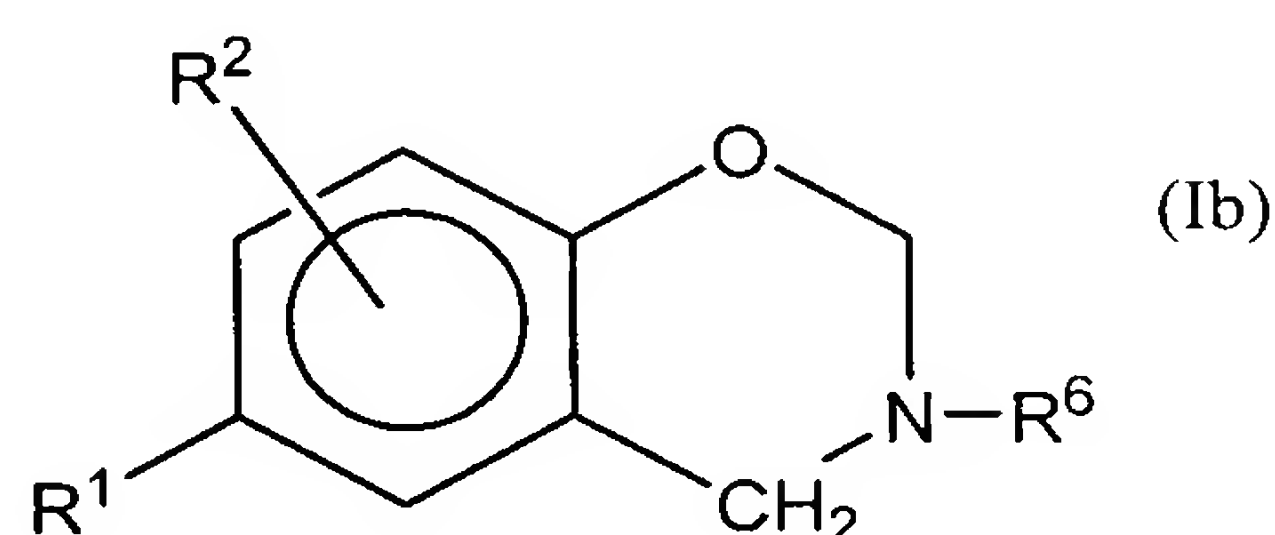
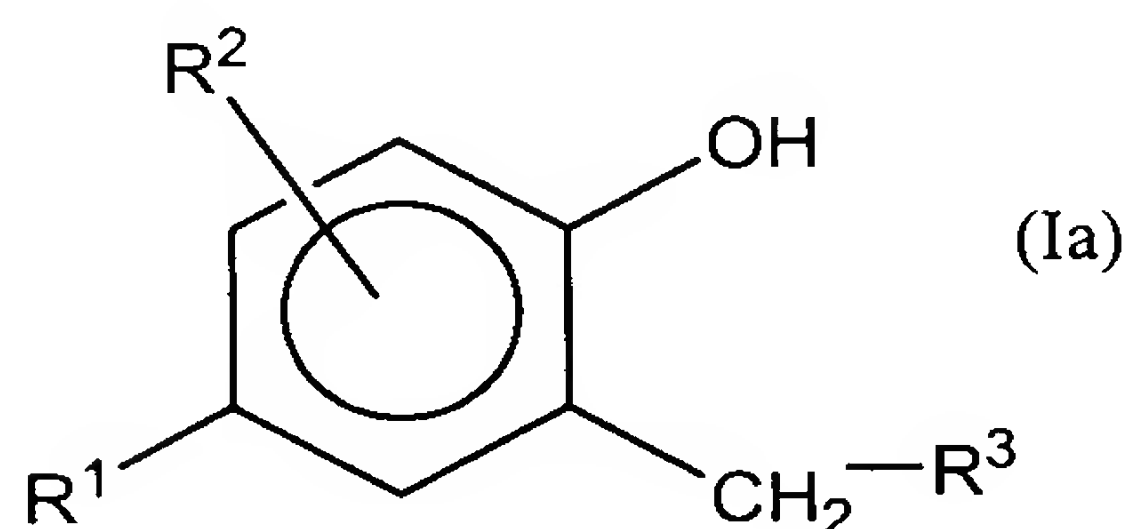
b1) an aldehyde chosen from formaldehyde, an oligomer of formaldehyde, and a polymer of formaldehyde, and

b2) at least one amine which has at least one primary or at least one secondary amino function,

wherein the phenol is 2-methyl phenol and the amine is an n-butylamine.

Claim 81 (Canceled)

Claim 82 (Previously Presented): A lubricant composition containing a main amount of a liquid, a semisolid, or a solid lubricant and an amount, having detergent activity, of at least one adduct comprising at least one compound of the formula Ia and Ib,



where

R^1 is a terminally bonded polyisobutenyl radical,

R^2 is H, C_1 - to C_{20} -alkyl, C_1 - to C_{20} -alkoxy, hydroxyl, a polyalkylenyl radical or $CH_2NR^4R^5$, where R^4 and R^5 have the meanings stated below, and

R^3 is NR^4R^5 , where R^4 and R^5 , independently of one another, are C_1 - to C_{20} -alkyl, and

R^6 is a radical R^4 or R^5 other than H,

wherein the adduct includes a 2-methyl phenol unit and an n-butylamine unit.

Claim 83-87 (Canceled).

Claim 88 (Previously Presented): The lubricant composition according to Claim 80, wherein the amine is di-n-butylamine.

Claim 89 (Currently Amended): The lubricant composition according to Claim [[82]] 80, wherein the n-butylamine is a primary amine.

Claims 90-92 (Canceled).

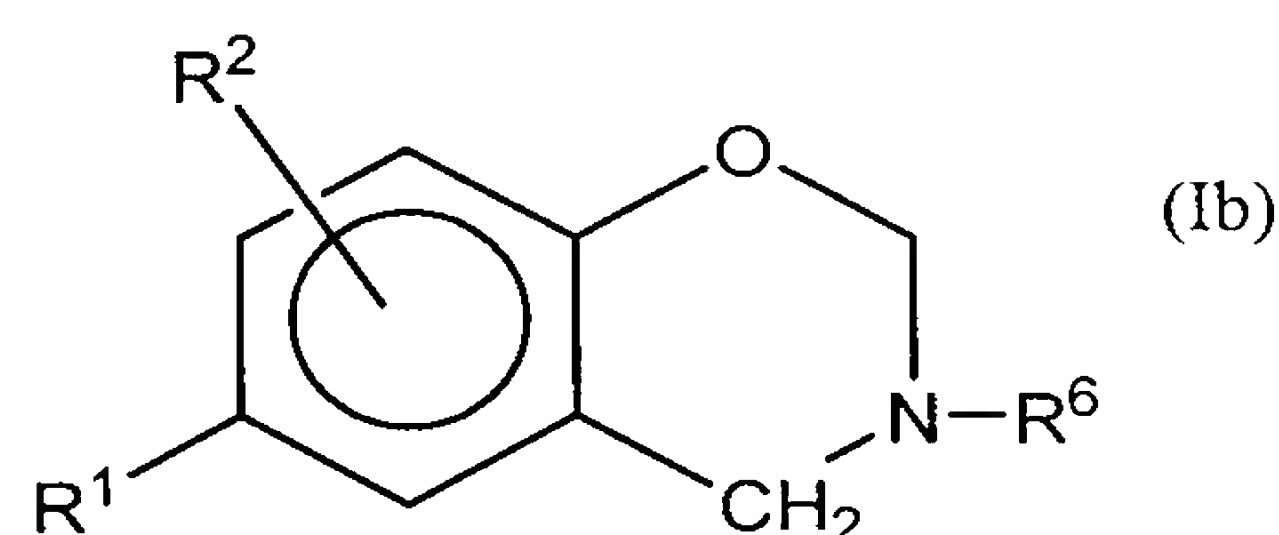
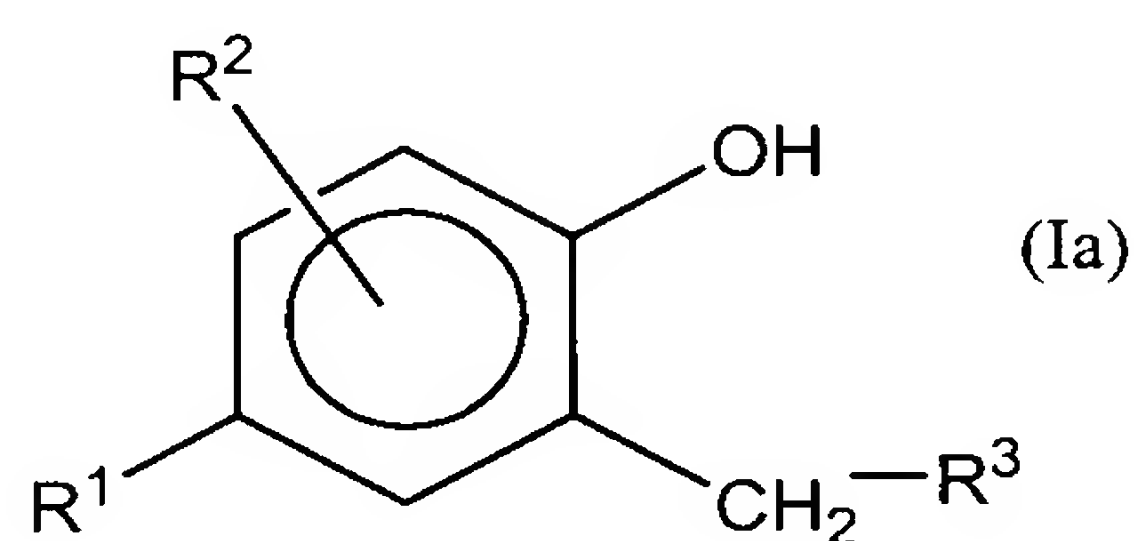
Claim 93 (New): A process for the preparation of polyisobutenylphenol-containing Mannich adducts, comprising:

- a) alkylating a phenol with a highly reactive polyisobutene having a vinylidene double bond content of more than 70 mol%, a number average molecular weight of from 300 to 850, and a polydispersity of less than 3.0 at below about 50°C, wherein the alkylating is carried out in the presence of an alkylation catalyst to form a reaction product; and
- b) reacting the reaction product from a) with

- b1) at least one aldehyde selected from the group consisting of formaldehyde, an oligomer of formaldehyde and a polymer of formaldehyde, and
- b2) at least one amine having at least one primary or at least one secondary amino function.

Claim 94 (New): The process as claimed in claim 93, wherein the amine reacted with the reaction product is at least one selected from the group consisting of 3-(dimethylamino)-n-propylamine, di(3-dimethylamino)-n-propylamine, dimethylamine, diethylamine and morpholine.

Claim 95 (New): The process as claimed in claim 93, wherein the reacting is carried out to form an adduct mixture comprising at least 40 mol% of at least one compound selected from the group consisting of formula (Ia) and (Ib),



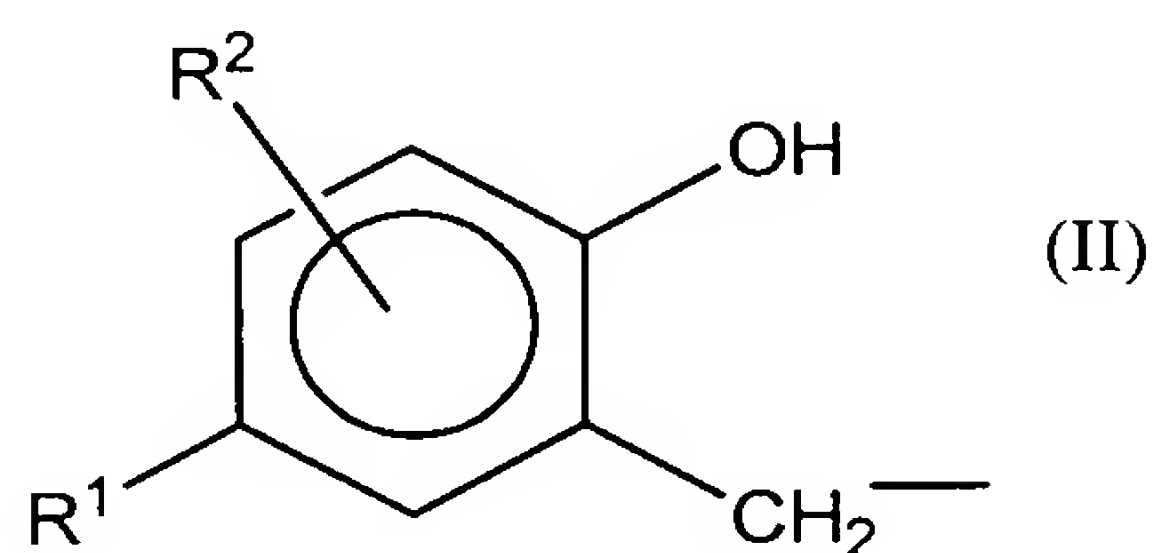
wherein

R^1 is a terminally bonded polyisobutenyl radical,

R^2 is H, C_1 - to C_{20} -alkyl, C_1 - to C_{20} -alkoxy, hydroxyl, a polyalkylenyl radical or $CH_2NR^4R^5$, where R^4 and R^5 have the meanings stated below, and

R^3 is NR^4R^5 , where R^4 and R^5 , independently of one another, are selected from H, C_1 - to C_{20} -alkyl, C_3 - to C_8 -cycloalkyl and C_1 - to C_{20} -alkoxy radicals which may be interrupted and/or substituted by heteroatoms selected from N and O, and phenol radicals of the formula

II



where R¹ and R² are as defined above;

with the proviso that R⁴ and R⁵ are not simultaneously H or phenol radicals of the formula II; or R⁴ and R⁵, together with the N atom to which they are bonded, from a 5-, 6- or 7-membered cyclic structure which has one or two heteroatoms selected from the group consisting of N and O and may be substituted by one, two or three C₁- to C₆-alkyl radicals; and

R⁶ is a radical R⁴ or R⁵ other than H.

Claim 96 (New): The process as claimed in claim 93, wherein the reacting is carried out to form an adduct having a polydispersity of from 1.1 to 3.5.

Claim 97 (New); The process as claimed in claim 96, further comprising:
fractionating the reaction mixture from b) by column chromatography over an acidic stationary phase by multistage elution with

- at least one hydrocarbon, and then
- at least one basic alcohol/water mixture.

Claim 98 (New): The process as claimed in claim 97, wherein the basic alcohol/water mixture comprises:

- a) from 75-99.5% by weight of at least one C₂- to C₄-alcohol,
- b) from 0.4-24.4% by weight of water, and

c) from 0.1-15% by weight of at least one amine which is volatile at room temperature.

Claim 99 (New): The process as claimed in claim 93, wherein the reacting is carried out to form an adduct mixture comprising up to 20 mol% of one or more polyisobutenyl phenols formed by the alkylating and which are not reacted in the reacting.

Claim 100 (New): The process as claimed in claim 93, wherein the reacting is carried out to form an adduct mixture comprising from 1-15 mol% of one or more polyisobutenyl phenols formed by the alkylating and which are not reacted in the reacting.

Claim 101 (New): A Mannich adduct obtained by the process as claimed in claim 93.

Claim 102 (New): A Mannich adduct obtained by the process as claimed in claim 95, wherein the Mannich adduct comprises at least 40 mol% of one or more compounds of formula Ia and Ib.

Claim 103 (New): A fuel and/or lubricant composition comprising a detergent effective amount of the Mannich adduct claimed in claim 101.

Claim 104 (New): An additive concentrate, comprising:
one or more conventional additive components, and at least one Mannich adduct as claimed in claim 101 in an amount of from 0.1 to 99% by weight.

Claim 105 (New): An additive concentrate, comprising:

one or more conventional additive components, and

at least one Mannich adduct claimed in claim 101 in an amount of from 0.5 to 80% by weight.

Claim 106 (New): A fuel composition, comprising:

a major amount of at least one liquid hydrocarbon fuel, and

at least one adduct as claimed in claim 101 in a detergent active effective amount.

Claim 107 (New): A lubricant composition, comprising:

a major amount of at least one of a liquid lubricant, a semisolid lubricant and a solid lubricant, and

at least one adduct as claimed in claim 101 in a detergent active effective amount.

Claim 108 (New): A gasoline or diesel fuel, comprising:

the fuel composition claimed in claim 106.